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VIETNAMESE LECTURERS' CONCERNS ABOUT BLENDED LEARNING IMPLEMENTATION: INSIGHTS FROM CONCERNS-BASED ADOPTION MODEL

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ABSTRACT

Blended learning has been increasingly implemented in higher education with the desire to transform teaching and learning. However, limited literature focuses on the perspectives of teachers who play a crucial role in adopting blended learning. This mixed-methods study utilized the Concerns-Based Adoption Model (Hall & Hord, 2006) to assess the stages of concerns among lecturers and their specific concerns regarding the top-down decision to adopt blended learning in a Vietnamese university. The Stages of Concerns Questionnaire was administered to 165 academic staff to explore their group concern profile, and follow-up semi-structured interviews were then conducted with 16 lecturers to delve into their specific concerns. The findings showed that the lecturers were early adopters of blended learning, exhibiting strong concerns about the adoption, particularly those unrelated and self-focused. The research also indicated that lecturers experienced instructional ambiguity in understanding the essence of blended learning, technological apprehension, workload stress, and skepticism about student learning autonomy. However, there were also encouraging indicators, such as the lecturers' readiness to learn about blended learning, their enthusiasm for intradisciplinary cooperation, and their flexibility in applying the teaching strategy. These insights help policymakers better understand the concerns and viewpoints of the lecturers. Furthermore, the conclusion of this paper includes some suggestions for improvement.

Keywords: *Blended learning, Concerns-Based Adoption Model, CBAM, Vietnamese higher education*

Introduction

Blended learning, a pedagogical approach adopted in universities in the late 1990s (Edward et al., 2018; Tutal & Yazar, 2021), has been widely used in higher education for nearly twenty years (Smith and Hill, 2019: 383). It is considered an improvement for both the traditional in-person mode of instruction and the fully online mode (Rasheed et al., 2020: 139), as it combines the best components of the two modes (Yen & Lee, 2011). This pedagogical approach is expected to be the "transformation of classroom environment from teaching to learning" (Edward et al., 2018: 2558). In this regard, students are encouraged to be fully involved in the learning process, think critically, and enhance their commitment and competence (Smyth et al., 2012). As a result, blended learning has gained recognition as a pedagogical trend that should be increasingly embraced in higher education (Hrastinski, 2019; Smyth et al., 2012).

In Vietnam, the adoption of blended learning was not widespread until the outburst of the pandemic. According to a research project conducted at the ministry level in 2017, only 19 out of 235 Vietnamese higher education institutions were reported to offer either fully online training programs or blended learning initiatives, highlighting the novelty of blended learning in the country at that period (Open University Ho Chi Minh City, 2021). The Covid-19 pandemic has then created a significant impetus for blended learning to expand. In practice, most Vietnamese tertiary institutions have informed their adoption of blended learning by integrating a learning management system (LMS) into their educational practices (Tang & Tien, 2020). This pedagogical innovation has also been implemented in a variety of disciplines, such as chemistry (Dai et al., 2021), English as a foreign language (Nguyen & Stracke, 2021), and business (Das et al., 2019). Despite the rising number of courses within the LMS environment, there is uncertainty about the quality of these courses due to poor technology facilities, lack of online synchronous and asynchronous interactions, and incapability to teach and manage online sections (Tang & Tien, 2020). Thus, purely traditional face-to-face learning is "still deep in the mind of learners" (Tang and Tien, 2020: 306), while the quality of online learning is still raising doubts (Tang & Tien, 2020).

To make a transition to blended learning, teachers are expected to change their teaching and interactions with their students (Pizzi, 2014) as the teacher drives what occurs inside the classroom. While the existing literature shows a noticeable number of studies on students' acceptance of blended learning, there is a dearth of research from teachers' perspectives (Smith & Hill, 2019).

Our study was carried out in one of the pioneering universities in Vietnam regarding technology integration. The school started using an LMS in 2016 and approved the project proposal mandating blended learning in 2020. Despite this progressive stance, our observations revealed a lack of proactive measures taken during the adoption of blended learning to identify where lecturers are standing in the adoption process or gather their perspectives on the initiative.

As an insider, the first author of this paper perceived that the adoption of blended learning among lecturers was superficial, marked by significant concerns and discomfort with this instructional approach. This motivated our study to employ the Concerns-Based Adoption Model to explore lecturers' concerns regarding blended learning adoption. The model allowed us to diagnose the level of adoption among lecturers and examine their concerns comprehensively, including both positive and negative aspects.

In essence, our research aimed to address two primary research questions:

1. What are the current levels of adoption of blended learning among lecturers at the university?
2. What are the specific concerns, both positive and negative, that lecturers have regarding the adoption of blended learning?

The research findings aim to provide decision-makers with valuable insights into lecturers' concerns regarding blended learning. By understanding these concerns, decision-makers can take appropriate actions to address them and support lecturers in successfully implementing blended learning initiatives. The research also aims to reach educators and administrators in the early stages of adopting blended learning in similar educational settings.

Literature Review

Blended Learning: The Concept and the Necessary Shift in Research Focus

The concept of blended learning recently seems to be a buzzword in education. It is sometimes referred to as hybrid, mixed-mode, integrated, or flexible learning. The two most frequently cited definitions of blended learning in literature are those proposed by Graham (2006) and Garrison and Kanuka (2004) (Hrastinski, 2019). While Graham (2006) suggested that "blended learning systems combine face-to-face instruction with computer-mediated instruction" (Graham, 2006: 5), the definition of Garrison and Kanuka (2004) was slightly narrower by adding a qualitative dimension of a 'thoughtful integration" (Garrison and Vaughan, 2013: 96) between the two mentioned ingredients (Müller & Mildenberger, 2021). Later, Graham also improved their description of blended learning as "the strategic combination of online and in-person instruction" (Graham, 2019: 11). Despite such attempts to characterize blended learning, the term remains an inclusive concept covering all modes of technology-mediated learning, except pure online and physical classroom learning. According to Smith and Hill (2019), this all-encompassing concept of blended learning, which may be purposeful, is problematic and ambiguous, leading to a myriad of diversified blended learning practices. Surprisingly, a consensus is that blended learning definitions should maintain flexibility (Huang et al., 2021). Such flexibility is expected to enable innovation (Garrison & Vaughan, 2013) and motivate the uniqueness of institutional blended learning (Moskal et al., 2013).

With the synergy of face-to-face learning and online learning, blended learning can optimize the advantages of both learning modalities (Poon, 2014). Many review papers (Smith & Hill, 2019; Zhang & Zhu, 2018) have shown that blended learning can improve learning outcomes, motivate students, increase engagement, enhance learning and teaching experiences, and encourage interactions, collaborations, and autonomy. Its benefits have been well documented and rehearsed through a significant number of empirical studies evaluating the effectiveness of blended learning (Van Laer & Elen, 2020). Due to such a saturation, there has been a concurrence that the focus should shift from bottom-up, small-scale, individual, and outcome-orientated studies to institutional adoption studies (Huang et al., 2021; Smith & Hill, 2019; Zhang & Zhu, 2018).

When it comes to institutional adoption, understanding the stakeholders' attitudes who ultimately decide the fate of the adoption is the first step (Hall & Hord, 2006). However, while students' beliefs, attitudes, and motivations have been explored abundantly, the acceptance of lecturers who are the primary direct adopters of blended learning has not received adequate attention (Anthony et al., 2020; Smith & Hill, 2019).

Existing Insights into Lecturers' Perspectives on Blended Learning Adoption

Halverson et al. (2014), cited by Smith and Hill (2019), reported that only 3,6% of the studies in their analysis focused on either faculty or administrator perceptions about implementing blended learning. Since then, there have been recognizable efforts to examine teachers' perspectives on this matter (Alvarez, 2020; Anthony et al., 2021, 2022; Boelens et al., 2017; Brown, 2016; Graham, 2019).

Nevertheless, most of the prior studies focused solely on a particular category of blended learning or one component of blended learning alone. For example, Akcayir and Akcayir (2018) examined the benefits and constraints of implementing the flipped classroom rather than considering blended learning as a holistic instructional approach. Their study specifically highlighted the technological difficulties that lecturers encountered. Meanwhile, Brown (2016) systematically reviewed the existing literature on faculty members' adoption and utilization of online tools for in-person instruction. The study revealed six influences faced by lecturers in adopting blended learning, which include engagement with technology, workload, institutional factors, lecturer attitudes and beliefs, and professional development (Brown, 2016). While these studies provide valuable insights, they do not offer a comprehensive understanding of lecturers' perceptions of implementing blended learning as a whole.

Some other studies have aimed to address this gap by examining lecturers' attitudes toward blended learning as a comprehensive approach that incorporates both online and on-site components. These studies primarily aimed to uncover the reasons behind lecturers' reluctance to adopt blended learning. For instance, in Ocak's (2011) study, 117 lecturers from four universities were interviewed, revealing the major barriers they faced when embracing blended practices. These barriers included complex and time-consuming instructional processes, poor planning and communication, teacher concerns regarding lack of institutional support and role stability, and technical issues, particularly difficulties with new technologies and limited internet access (Graham, 2019). Similarly, Alvarez (2020) conducted a qualitative study at a university in Manila, Philippines, identifying five obstacles to blended learning adoption: technological challenges, instructional concerns, class size issues, limited technical support, and collaboration difficulties. Lecturers' acceptance of blended learning, according to Anthony et al. (2020), is also shaped by their experience, dedication level, motivation, adaptability, and the quality of the system involved.

In Vietnam, blended learning is in an early stage of development. Like the global landscape of blended learning research, the extant studies on blended learning in Vietnamese contexts mainly aim to explore students' perspectives more than teachers' or administrators' perspectives (Dinh et al., 2021; Ho et al., 2022; Le & Johnson, 2022). Recently, lecturers' voices about blended learning adoption seem to attract more attention from researchers (Cao, 2022; Hoang, 2015; Le et al., 2022; T. H. Nguyen, 2019; Pham & Nguyen, 2021; Phuong et al., 2022). Several studies have attempted to define the current stage of Vietnamese lecturers' adoption process regarding blended learning, with the majority indicating that Vietnamese lecturers predominantly remain in the early stage of adopting blended learning in their teaching (Cao, 2022; Dai et al., 2021; Hoang, 2015; Tang & Tien, 2020). Additionally, prior research has shed light on the perspectives of faculty teaching in Vietnamese universities. On the one hand, they exhibit a favorable attitude toward the potential impact of blended learning on their students' learning (Phuong et al., 2022). On the other hand, they reveal diverse concerns restraining their adoption. These concerns may include informational concerns, reflecting apprehension about their lack of understanding of the nature of blended learning (Hoang, 2015; Le et al., 2022). Some

concerns are personal, arising from comparisons between the requirements of blended learning and their current competence, particularly their technological competence (Cao, 2022; Hoang, 2015; Tang & Tien, 2020). Other concerns are related to managerial aspects, such as inadequate infrastructure and technology, insufficient institutional policies and support, and large class sizes (Le et al., 2022).

Identified Research Gaps or Motivations for the Study

While the findings of earlier studies are significant, further research is necessary to explore the viewpoints of Vietnamese lecturers regarding the adoption of blended learning. Faculty members play a critical role as major change agents and are essential in the planning and implementation of blended learning (Smith and Hill, 2019: 395). Therefore, knowing where lecturers currently are in the adoption process can help to inform appropriate interventions supporting their implementation of blended learning. As mentioned above, a common conclusion from the previous studies conducted in Vietnam is that lecturers are still early adopters of blended learning. However, most of those studies are qualitative case studies with a modest sample size (Le et al., 2022; Le & Johnson, 2022; Pham & Nguyen, 2021; Thi Thao Nguyen et al., 2021). Therefore, employing a quantitative investigation grounded in a reliable framework to measure their level of adoption would effectively fill the existing research gap on this matter.

In addition, institutional blending is a sizable change in lecturers' professional practice, and it may be resisted due to lecturers' reluctance (Huang et al., 2021; Porter et al., 2014). It is essential not only to identify factors influencing the lecturers' adoption, particularly the constraints, but also to gain a comprehensive understanding of lecturers' perspectives, including their worries, care, and opinions. In this way, both supportive and restraining voices could be heard, providing a more unbiased and insightful comprehension of the lecturers' emotional reactions towards blended learning. To gain such a nuanced understanding, the study integrated a qualitative component to shed light on lecturers' concerns regarding the adoption of blended learning.

This study aimed to support lecturers in introducing blended learning at a Vietnamese university, where no prior investigations had been conducted to explore their viewpoints. To address the above gaps, it was designed to explore the lecturers' perception of their blended learning adoption both broadly and deeply. On the broad dimension, we quantitatively assessed the level of adoption among the lecturers. On the deep dimension, we investigated their particular verbal responses to the adoption. This approach enabled us to capture the overall picture of the adoption and to identify the key factors that facilitated or hindered their implementation.

Theoretical Framework

In this study, the Concerns-Based Adoption Model (CBAM) was used to explore lecturers' current concerns about the implementation of blended learning. The CBAM is a well-established conceptual framework that originated from Fuller's work (Fuller, 1969), first proposed by Hall and Dossett (1973), and subsequently refined through various studies, including Hall (1977), Hall and Hord (1987), Hall and Hord (2006), and George et al. (2006). Rooted in change science (Olson et al., 2020), the CBAM asserts that change is not merely an event but a developmental process that begins at the individual level (Hall & Hord, 2006).

The CBAM framework encompasses three main diagnostic dimensions: the Stages of Concern (SoC), which explores individual feelings of change agents, describing how they perceive and how they feel about the innovation; the Levels of Use, which depict behavioral profiles or patterns of users when adopting the innovation; and the Innovation Configuration which defines different ways of implementing the innovation. However, due to time constraints and the preliminary nature of the research, we decided to probe solely into lecturers' SoC about implementing blended learning in this research.

The SoC defines concerns as affective reactions to change. Concerns embrace "feelings, perceptions, preoccupations, thoughts, considerations, motivations, satisfactions and frustrations that collectively describe an individual's stage" (Dunn and Rakes, 2011: 44) when encountering an educational innovation. The SoC consists of seven stages of concern: Awareness (Stage 0), Informational (Stage 1), Personal (Stage 2), Management (Stage 3), Consequence (Stage 4), Collaboration (Stage 5), and Refocusing (Stage 6). These constructs fall under four major categories: unrelated concerns, self-concerns, task concerns, and impact concerns. Being exposed to an innovation can trigger its adopters' concerns, which may be facilitating or constructing its implementation. As the CBAM posits that change is a developmental growth, teachers' concerns move from lower-level concerns to higher-level concerns, particularly from unrelated concerns (teachers are unconcerned), to self-concerns (teachers focus on self-stuff), to task concerns (teachers are concerned about the implementation of the task) and finally to impact concerns (teachers are concerned about the adoption's impact on their students). However, the findings of some prior studies concluded that concerns do not usually follow a linear development, and they are not mutually exclusive. It is very often that a teacher may experience multiple stages of concern. Those stages may overlap and vary in intensity (Ashrafzadeh & Sayadian, 2015; Dele-Ajayi et al., 2021).

Table 1: Stages of Concerns

Unrelated concerns	*Stage 0: Awareness* The individual at this stage has little knowledge or shows little interest and engagement with the proposed innovation.
Self concerns	*Stage 1: Informational* The individual at this stage has a general awareness of and interest in learning more about the innovation. They would like to discover impersonal and substantive details of the innovation.
	Stage 2: Personal The individual at this stage is uncertain about the demands of the innovation, wondering if their skills and ability meet the requirements and how the innovation rewards and affects them.
Task concerns	*Stage 3: Management* The individual at this stage has concerns about logistics, administration, organization, and resources available for the innovation.
Impact concerns	*Stage 4: Consequence* The individual at this stage concentrates on the influence of the innovation on students and thinks about whether changes need to be made to improve students' outcomes.
	Stage 5: Collaboration The individual at this stage focuses on actively working with others to implement the innovation and make it workable.
	Stage 6: Refocusing The individual at this stage indicates interest in making significant changes of modifying, developing enhancing, or even replacing the innovation.

The SoC has been widely used to probe into the stages of concerns of teachers when adopting a technology-related innovation (Al-Furaih & Al-Awidi, 2020; Ashrafzadeh & Sayadian, 2015; Eutsler & Long, 2021; Haines, 2018; Hao & Lee, 2015). Yet, to the authors' knowledge, only one study reported on 152 Social Science faculty members' stages of concern about introducing

a flipped classroom, a model of blended learning, into their teaching practice (Jong, 2019). The research, a quantitative study using SoC, revealed that the teachers had high levels of informational concerns and management concerns. From the findings, Jong (2019) suggested more precise interventions addressing what the teachers actually needed when flipping their classes, especially in terms of information about this teaching approach and its related logistics.

In the current study, blended learning emerged as a mandated educational innovation within the investigated university. While it was claimed to be integrated into the university's teaching and learning routines, a reliable tool was needed to evaluate the extent to which lecturers were embracing this innovative teaching approach and to identify the factors influencing their adoption. The CBAM, particularly the SoC, was selected as the research framework. Firstly, the CBAM, by investigating users' concerns, allows for a comprehensive understanding of the progression of adoption, from initial awareness to full integration. Therefore, in this research, the CBAM facilitates the examination of lecturers' affective perceptions towards blended learning, thereby shedding light on their position in the adoption process. Secondly, the CBAM is a well-established instrument in educational settings for measuring innovations. Specifically, it has been applied in higher education contexts in developing countries similar to the Vietnamese context (Al Masarweh, 2019; Al-Furaih & Al-Awidi, 2020; Dele-Ajayi et al., 2021). Its tools, including the SoC, have undergone extensive testing in multiple studies, consistently demonstrating validity and reliability (Cardoza & Tunks, 2014; Dele-Ajayi et al., 2021; Dunn & Rakes, 2011; George et al., 2006; Jong, 2019). Thirdly, applying CBAM can produce timely feedback and pave the way for data-driven actions to enhance progressive educational change (Olson et al., 2020), especially to inform, assess, and support professional development (Saunders, 2012). In this study, the SoC questionnaire was applied to depict lecturers' user profiles of blended learning, thereby defining their level of adoption. Furthermore, for qualitative data, the SoC guided the design of the data collection instrument and the coding process later. Based on the findings, implications to enhance blended learning adoption among Vietnamese lecturers were proposed.

Methodology

Research Design

This study utilized a mixed methods research design (Creswell & Plano Clark, 2018) within a case study. As a snapshot of lecturers' current concerns about blended learning in the early implementation phase, this cross-sectional research underwent two distinct stages. The first involved the administration of the Stages of Concern Questionnaire (SoCQ), spanning from December 5th to December 26th, 2023, while the second stage encompassed semi-structured interviews conducted from January 6th to January 31st, 2023. Consequently, the quantitative results regarding the blended learning adoption were not only acquired but also clarified in greater detail, particularly concerning the nuanced voices and perspectives of participants. This approach enabled the uncovering of the underlying mechanisms behind the observed trend (Creswell & Plano Clark, 2011, 2018).

Sample Size and Sampling Recruitment

In selecting participants for this study, certain criteria were established to ensure the sample's relevance and representation. The study was conducted at a Vietnamese public university

known for its early adoption of blended learning, chosen for its accessibility to one of the authors, which facilitated ethical approval and participant recruitment. The target population comprised the academic community of the university. It was decided to exclusively include full-time lecturers, as they were deemed more likely to offer a comprehensive representation of teaching practices and to align with instructional policies compared to their part-time counterparts. Physical education instructors were deliberately excluded due to their limited utilization of blended learning, resulting in a total of 483 lecturers meeting the inclusion criteria.

Participants for Quantitative Data: For the quantitative phase, efforts were made to maximize the sample size. The SoC questionnaire was distributed via email to the sampling frame of 483 full-time lecturers, resulting in a return of 178 responses. Subsequently, 13 responses were excluded due to incompleteness or anomalies, leaving a final sample size of 165 responses, which accounted for 35% of the total full-time academic staff (Table 2). It should be noted that while these responses provided valuable insights, they may not fully represent the diverse academic community in terms of disciplines, experience with blended learning, and demographics.

To address potential limitations in sample representativeness, statistical analyses were conducted to examine the relationship between lecturers' stages of concern regarding blended learning and demographic variables. Specifically, t-tests and analysis of variance (ANOVA) were employed to explore how these demographic factors may influence lecturers' concerns about blended learning adoption. Further discussion on the potential impact of sampling limitations, as well as the results of the t-tests and ANOVA, are provided in subsequent sections of this study.

Table 2: Demographics of Participants for Quantitative Data

	Frequency	Percent		Frequency	Percent
Gender			*Age*		
Male	66	40.0	< 30	10	6.1
Female	99	60.0	30 – 39	61	37.0
Academic degree			40 – 49	55	33.3
Bachelor's	3	1.8	50 – 59	35	21.2
Master's	106	64.2	> 60	4	2.4
Doctorate	56	33.9	*School of*		
Time of using BL			Economics	16	9.7
Never	51	30.9	Management	13	7.9
< 1 year	51	30.9	International Business – Marketing	7	4.2
1 – 2 years	34	20.6	Public Finance	4	2.4
3 – 4 years	19	11.5	Finance	11	6.7
5 – 6 years	7	4.2	Banking	17	10.3
> 6 years	3	1.8	Accounting	21	12.7
Self-perceived competence of using BL			Economic Mathematics – Statistics	4	2.4
Undefined (vague awareness of BL)	14	8.5	Business Information Technology	7	4.2
Non-user	32	19.4	Social sciences	11	6.7
Novice	37	22.4	Law	11	6.7
Pre-intermediate	58	35.2	Government	3	1.8
Intermediate	21	12.7	Foreign Languages	33	20.0
Old hand	3	1.8	Tourism	6	3.6
Past user	0	0.0	International School of Business	1	0.6

Note: BL = Blended Learning

Participants for Qualitative Data: At the conclusion of the questionnaire, respondents were given the option to provide their email addresses if they were willing to participate in follow-up interviews. Interested participants provided a total of 23 email addresses. From this pool, we purposively selected 16 participants to ensure representation across various demographic factors such as gender, experience with blended learning, academic degree, age, and discipline. This selection process aimed to achieve the best consistency with the sample size and demographic distribution observed in the quantitative stage of the study while also maximizing the range of perspectives.

Data Collection

For Quantitative Data: To collect quantitative data on teachers' concerns about blended learning implementation, we adopted the SoCQ. According to George et al. (2006), the SoCQ was developed to provide a quick-scoring measure of the seven Stages of Concern about an innovation" (p. 11). It is a quantitative tool of SoC that "measures what a teacher or user is feeling about an innovation" (p.ix). The main part (the statement section) of the SoCQ consists of 35 items, 5 items exploring one stage of concern. The items are listed in a mixed order and use an 8-point Likert scale indicating the increasing intensity of concern. Particularly, respondents are supposed to rate 35 statements among *irrelevant* (0), *not true of me now* (1, 2), *somewhat true of me now* (3, 4, 5), and *very true of me now* (6,7). Examples of the statements can be seen in Table 4, which lists five items of Stage 1.

Table 3: Demographics of Participants for Qualitative Data

Participant	Gender	Age (Years)	Academic degree	Teaching experience	Time of using BL	Self-perceived competence of using BL	School of
Lecturer 1	Male	25	Master's	6 months	6 months	Novice	Law
Lecturer 2	Female	48	Master's	25 years	N/A	Non-user	Foreign Languages
Lecturer 3	Female	41	Doctorate	18 years	6 years	Pre-intermediate	Banking
Lecturer 4	Male	41	Mater's	18 years	N/A	Non-user	Business Information Technology
Lecturer 5	Female	31	Mater's	9 years	1 year	Novice	Foreign Languages
Lecturer 6	Male	56	Doctorate	13 years	N/A	Non-user	Economics
Lecturer 7	Male	47	Doctorate	24 years	10 years	Intermediate	Law
Lecturer 8	Male	35	Doctorate	13 years	5 years	Pre-intermediate	Finance
Lecturer 9	Male	37	Mater's	6 years	4 years	Intermediate	Business Information Technology
Lecturer 10	Male	30	Master's	8 years	1 year	Novice	Foreign Languages
Lecturer 11	Male	41	Doctorate	8 years	2 years	Intermediate	Economics
Lecturer 12	Female	44	Doctorate	16 years	4 years	Novice	International Business
Lecturer 13	Female	43	Master	20 years	N/A	Non-user	Foreign Languages
Lecturer 14	Female	40	Doctorate	17 years	2	Novice	Economics
Lecturer 15	Male	47	Doctorate	24 years	15	Old hand	International Business
Lecturer 16	Female	28	Master's	6 years	2 years	Novice	Tourism

Note: BL = Blended Learning; N/A = Not Available

Table 4: Items Exploring Stage 1 Concerns

Item number	Item
6	I have very limited knowledge of the innovation
14	I would like to discuss the possibility of using the innovation
15	I would like to know what resources are available if we decide to adopt this innovation
26	I would like to know what the use of the innovation will require in the immediate future
35	I would like to know how this innovation is better than what we have now

The current study obtained the license to use SoCQ granted by the American Institutes for Research, which possesses the CBAM tools and publications instructing their usage. There were two main parts in our Vietnamese SoCQ employed in this research. The first part was to collect the participating lecturers' demographic information, including gender, age group, discipline, years of using blended learning, and perceived competence of this approach (see Table 2). The second part consisted of 35 SoC items. In this part, we minorly changed the original items by replacing the term "innovation" with "blended learning," then, two researchers independently translated the questionnaire into Vietnamese. The two translations were then compared and discussed among Vietnamese authors. The agreed translation was later sent to two experienced Vietnamese English lecturers for language accuracy and appropriateness checking. Sequentially, we transferred the questionnaire to Qualtrics and sent the link to 8 lecturers for piloting. Comments on language use, cover letter, and layout were collected and considered to finalize the official version, which was then emailed to the lecturers.

As a widely used tool, the validity and reliability of the SoCQ have been confirmed in various studies (Al-Furaih & Al-Awidi, 2020; Dele-Ajayi et al., 2021; Dunn & Rakes, 2011; George et al., 2006; Jong, 2019). However, the researchers found it necessary to examine the internal reliability of all stages of concern featured in the revised questionnaire. Using the SPSS 26, we computed Cronbach's alpha for each stage. As illustrated in Table 5, all the Cronbach's alpha coefficients surpass 0.7. This outcome strongly suggests that the Vietnamese version of the SoCQ utilized in our research attains commendable reliability.

Table 5: Alpha Reliability for the SoCQ Subscales for the Surveyed Sample

Stages of concern		α reliability
0	Awareness	0.71
1	Informational	0.81
2	Personal	0.86
3	Management	0.85
4	Consequence	0.85
5	Collaboration	0.83
6	Refocusing	0.79

For Qualitative Data: We conducted 16 semi-structured interviews with 16 lecturers who accepted the interview request. Each interview was approximately one-hour long and done in Vietnamese. We believe that the use of the native language could allow the participants to express their thoughts more comprehensively than the use of English. All the interview sessions were conducted online on Google Meet due to the convenience of the participants. The researchers decided to use semi-structured interviews because they are "neither rigid nor too open and allow new questions if needed to be brought up" (Aung et al., 2021, p. 601). The prompts of the interviews were mostly developed from SoCQ to get an in-depth understanding of particular concerns that lecturers held about blended learning) (see Table 6).

Table 6: Semi-structured Interview Prompts

Focus	Prompt
General	Have you implemented blended learning in your teaching practice? - If no, why haven't you? - If yes, why have you? How long have you implemented it? What advantages and disadvant do you have when implementing it?
Stage 0	How much are you interested in blended learning?
Stage 1	Currently, what do you want to know about blended learning?
Stage 2	How do you think the implementation of blended learning can affect you personally?
Stage 3	What do you think it takes you logistically to implement blended learning?
Stage 4	How do you think blended learning affects your students?
Stage 5	How willing are you to coordinate your efforts with others to maximize the blended learning's effect
Stage 6	Do you have any ideas about something that would work even better than the blended learning you doing?

Data Analysis

For the quantitative data derived from the SoCQ, we opted for the profile analysis as it stands out as the most comprehensive and commonly employed method (George et al., 2006). Initially, with the use of SPSS 26, we calculated raw scores for each participant across all stages. Next, the average raw scores for six stages were computed for the entire sample. These mean raw scores were then converted into percentile scores using the provided conversion table in the SoCQ manual (George et al., 2006). Subsequently, we generated a visual graph to portray the group profile, which was later interpreted following the guidelines set by George et al. (2006). The final step involved conducting a T-test and ANOVA to examine whether lecturer demographics, which include gender, age group, academic degree, duration of using blended learning, and perceived competence in using blended learning, could predict their concerns.

For the qualitative data, interview recordings were transcribed and then sent back to the participants for accuracy checking. After confirmation, the transcripts were uploaded to NVivo 11. The analysis of interview transcripts (Figure 1) utilized thematic analysis, following a five-phase process of qualitative data analysis proposed by Bingham (2023). This approach incorporated both deductive and inductive coding strategies to comprehensively examine the data, facilitating proper recognition of participants' voices while allowing for a more theory-driven analysis (Proudfoot, 2023). Additionally, the process involves guided memoing and analytic questioning, contributing to the trustworthiness and rigor of the study (Bingham, 2023).

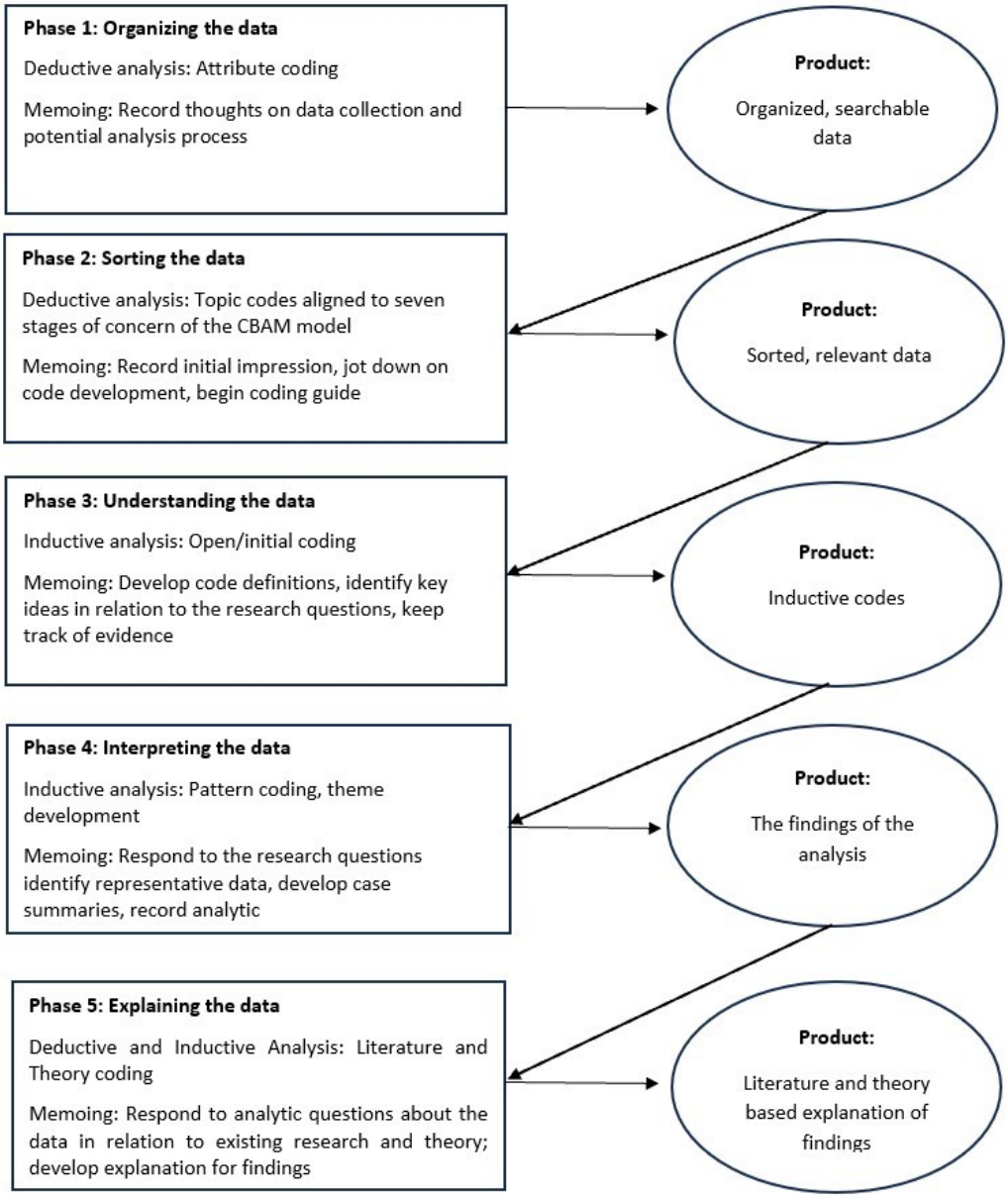

Figure 1: The Five-phase Qualitative Data Analysing Process (Adapted from Bingham (2023))

To ensure coding reliability, four out of sixteen transcripts (25%) were coded independently by two researchers. The inter-coder agreement initially reached 88%. Disagreements were resolved after discussion, and the final inter-coder agreement was 96%, providing satisfactory inter-coder reliability. Afterward, the primary coder assumed the responsibility of autonomously coding the remaining data. During the coding process, we retained the transcripts in Vietnamese. When the coding was completed, the two researchers independently translated all coded data into English. The translations were then contrasted to produce the final translation. Finally, the emerged categories, themes, and patterns were analysed and compared against the SoCQ results.

Ethics Considerations

The research obtained ethics approval from the relevant university's Ethics Committee and permission to access faculty members' email lists. Participants were informed about the research before data collection, and explicit consent forms were obtained to ensure voluntary participation. The anonymity of questionnaire respondents and the confidentiality of interviewees were assured throughout the research.

Findings

This section presents the findings from the study, organized into two main parts: quantitative results from the survey and qualitative insights from the interviews. The quantitative part will cover the survey results, including the SoC profile and demographic analysis. The qualitative part will delve into the themes and sub-themes identified through the interviews, highlighting both constraining and enabling factors affecting lecturers' adoption of blended learning.

Quantitative Findings: The Current Stage of Blended Learning Adoption among Lecturers According to the Concerns-Based Adoption Model

The survey results presented a contrasting scenario between the lecturers' group SoC profile and their self-assessment of blended learning competence: The participants expressed optimism about their adoption, with 69.1% stating prior practice and 49.7% perceiving themselves at the pre-intermediate, intermediate, or advanced level in using blended learning. However, their group SoC profile presented numerically in Table 7 and graphically in Figure 2, indicated that they were still in the early phase of adopting this pedagogical innovation.

The SoC profile aligns with the non-user profile as defined by the SoC manual (George et al., 2006). Specifically, its shape is characterized by highest intensity in the lower-level stages (Stage 0, Stage 1, Stage 2), moderate in the intermediate stage (Stage 3), and lowest in the higher-level stages (Stage 4, Stage 5, and Stage 6). From the profile, we can see that the participants, in general, were not fully aware of blended learning. In fact, they had a higher interest in other matters (indicated by a high percentile score in Stage 0). As Stage 1 and Stage 2 are also high, it can be inferred that the lecturers were willing to learn about this innovation, but they also held significant personal concerns regarding the demands and impacts of blended learning on them. Their concerns about logistical aspects (Stage 3), the influence of blended learning on their students (Stage 4), and collaboration with others (Stage 5) were not currently prominent priorities. Notably, a tailing-up of Stage 6 can be a warning of potential resistance from the lecturers (George et al., 2006).

Table 7: Mean and Percentile Score of Each SoC Stage

Stage of Concern		Mean	Percentiles
0	Awareness	15,15	87
1	Informational	24,55	89
2	Personal	25,42	86
3	Management	20,79	80
4	Consequence	26,3	60
5	Collaboration	23,22	60
6	Refocusing	22,13	73

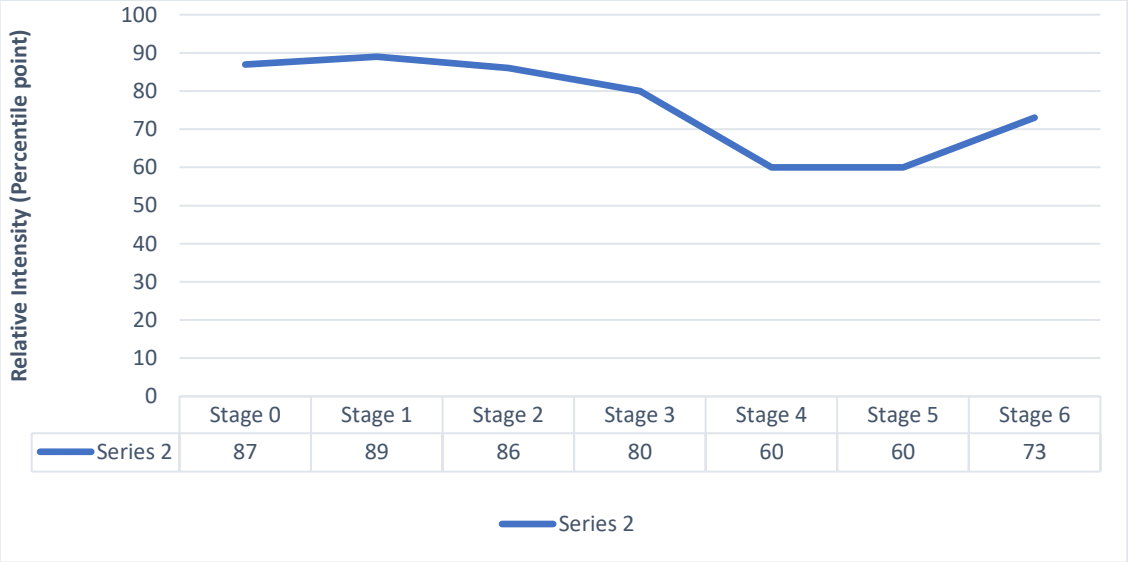

Figure 2: The Lecturers' Stages of Concern Profile

Regarding the relationship between lecturers' stages of concern and demographic variables, the independent sample T-test showed no significant differences between teachers' intensity of concern by their gender. In terms of the results from the one-way ANOVA, age, academic degree, and time of using blended learning were not significant predictors of teachers' concern levels. However, significant differences were observed in Stage 3 (Management) according to lecturers' self-perceived competence in using blended learning, as well as in Stage 5 (Collaboration) regarding lecturers' discipline.

The post hoc test was then conducted to unveil the differences further. As a result, the old hands (M = 0.7) and the intermediate users (M= 2.4) were significantly less concerned about management aspects than the non-users (M = 3.2) and the undefined ones (M = 3.6). These findings suggest that increased confidence in using blended learning is associated with reduced anxiety about its logistics. Regarding the relationship between Stage 5 (Collaboration) and discipline, an important finding emerged: lecturers from Business Information Technology school (M = 6) exhibited significantly greater interest in collaborative work than their counterparts in Banking (Sig. = .001), Foreign Languages (Sig. = .002), Government (Sig. = .012), Mathematics – Statistics (Sig. = .025), and Economics (Sig. = .028).

Qualitative Findings: Lecturers' Concerns about Blended Learning Adoption

The analysis of interview data revealed some lecturers' prominent concerns regarding implementing blended learning. These concerns were sub-themes that emerged from coding, categorizing, and synthesizing interview data. These concerns were mapped into different stages of concern, ranging from Stage 1 (Informational) to Stage 6 (Refocusing). We decided to exclude Stage 0 (Awareness) from our consideration due to its focus on participants' level of interest. While the survey results indicated a relatively high percentile score in Stage 0, meaning blended learning was not a central aspect of the lecturers' thinking and work, it was observed that the interview participants consisted mainly of individuals with a significant interest in this instructional innovation. This was not surprising as interview participants typically exhibited

a notable interest in the researched topic. To ensure unbiased findings, we chose not to include the results related to Stage 0 in our report.

The findings on lecturers' specific concerns about the adoption of blended learning are summarized in Table 8. The sub-themes presented in the table represent the predominant concerns identified throughout the analysis and their corresponding SoC. These concerns were subsequently categorized into two overarching domains: constraining and enabling factors. This categorization allowed for a comprehensive understanding of the positive and negative aspects of lecturers' perceptions of the implementation of blended learning.

Table 8: Summary of Emerged Themes and Sub-themes

Theme	Subtheme	Corresponding SoC
Constraining factors	Instructional ambiguity	Informational (Stage 1)
	Technological apprehension	Personal (Stage 2)
	Workload stress	Management (Stage 3)
	Scepticism about student autonomy	Consequence (Stage 4)
Enabling factors	Learning readiness	Informational (Stage 1)
	Intradisciplinary collaboration enthusiasm	Collaboration (Stage 5)
	Adaptability	Refocusing (Stage 6)

Constraining Factors Affecting Lecturers' Blended Learning Adoption: Constraining factors encompass the hurdles arising from the lecturers' self-concerns (instructional ambiguity and technological apprehension), their task-related concerns (workload stress), and their impact concerns (skepticism of student autonomy).

First of all, the uncertainty about the nature of blended learning was one of the most noticeable findings of our study. This sub-theme aligned with the lecturers' high level of informational concerns (Stage 1), yielding their strong demand for information on blended learning. 11 out of 16 interviewees stated that they heard about blended learning from training courses held by the university but still felt confused about the essence and the practices of blended learning.

> I attended some training courses at our university when we moved to teaching online. Some methods were mentioned in the courses, such as flipped learning, blended learning, or hybrid learning, but I am still unclear about the differences between them. Which one will be employed at our university? Is what we are doing blended learning? I am not really sure about those. (Lecturer 12)

When asked to share their current understanding of this concept, the participants provided varied definitions. Some participants believed that simply using video conferencing tools like Zoom, Google Meet, or Microsoft Teams constituted blended learning. Others associated blended learning with the integration of technology into teaching. Some mentioned that blended learning involved a combination of online and offline teaching, but they expressed uncertainty regarding the underlying principles and specific implementation details.

Another noteworthy self-concern observed among the lecturers in this study was their technological apprehension. This concern fell into the category of personal concerns (Stage 2) since it stemmed from the lecturers' comparison of their capabilities with the requirements of blended learning. A significant portion of the participating lecturers, especially those aged over forty, displayed little confidence in integrating technology into their teaching practice.

Consequently, some lecturers exhibited hesitance towards adopting the blended learning approach.

> I am not good at using technology, so I don't think I can do well with this approach. I can only do simple tasks with technologies such as designing PowerPoint slides or using search-based tools. And I am afraid that I can't deal with technical issues when teaching with technology. I feel pretty worried about this. (Lecturer 2)

Additionally, the lecturer participants expressed significant workload stress associated with implementing blended learning. This concern was voiced by lecturers who had already adopted blended learning as well as those who had not yet incorporated this teaching approach. They anticipated or experienced a sense of being overwhelmed when handling multiple tasks simultaneously, such as designing teaching and learning activities, managing student progress, and curating and developing teaching materials, all within limited time constraints.

> I have been using blended learning with my classes for a couple of years, and I realize there are many things to do, including making videos, designing quizzes, searching for reference materials, assigning tasks, marking, and giving feedback. It takes time to prepare lessons as I have to develop materials for both the LMS and physical classes. (Lecturer 8)

Meanwhile, several lecturers expressed their skepticism regarding the impact of blended learning due to their students' low learning autonomy. They speculated that students' performance could be unsatisfactory due to a perceived lack of autonomy in their learning process.

> I think students need to be self-disciplined when learning with this approach. They, albeit with lecturers' facilitation, must do things by themselves, so I am a bit concerned about student learning autonomy levels at our university. If students are not engaged in learning activities, I am afraid that their academic performance will be negatively affected. (Lecturer 14)

Enabling Factors Affecting Lecturers' Blended Learning Adoption: In addition to the identified constraints, the interviews with the lecturer participants uncovered enabling factors indicating their positive attitudes towards implementing blended learning. The enabling factors comprising learning readiness, intradisciplinary collaboration enthusiasm, and adaptability corresponded to the stage of informational concerns, the stage of collaborative concerns, and the stage of refocusing concerns, respectively.

An important finding of this study was the participants' strong sense of learning readiness regarding blended learning. On the one hand, the interviewed lecturers confessed their uncertainty about the nature of blended learning, as highlighted in the subtheme "Instructional Ambiguity." On the other hand, they exhibited a notable eagerness to acquire knowledge about this pedagogical approach.

> First and foremost, I need to understand the essence of blended learning properly, how it differs from online and face-to-face teaching, and how to implement it correctly. Additionally, I aim to grasp the correct methods for effectively implementing blended learning. (Lecturer 13)

Some participants expressed a need for additional training from the school, while others acknowledged their knowledge of blended learning but felt uncertain as it was mainly acquired

through self-learning in an unsystematic manner. These participants sought validation and confirmation of their understanding. Interestingly, the only participant claiming to have sufficient knowledge of blended learning was a veteran with approximately 15 years of experience in its implementation.

In terms of collaborative spirit, the study revealed that the lecturers expressed interest in engaging in collaborative efforts within their discipline when it came to blended learning. They expressed a desire to learn from their colleagues and leverage their experience in various aspects, such as creating teaching materials, designing activities, and producing lecture videos. However, they showed hesitation and uncertainty when it came to interdisciplinary collaboration or leading the collaboration.

> I am willing to collaborate with colleagues to implement blended learning in my courses. Still, I am unsure if collaborating with those teaching different fields of knowledge works, as each discipline has its characteristics. We cannot have one size that fits all. (Lecturer 12)

> I am more than happy to participate in experience-sharing sessions regarding applying blended learning, of course, as an attendee. (Lecturer 2)

Finally, the study highlighted the presence of adaptive teaching strategies among the lecturers, as revealed through their responses regarding suggestions for an alternative approach that could potentially yield better results than blended learning. While the participants expressed no intention of completely replacing blended learning or making drastic changes, they expressed a strong desire to make adaptations to suit their specific teaching contexts. Factors such as targeted learning objectives, class size, students' academic level, and students' engagement were considered by the lecturers. They emphasized the importance of varying the teaching script and the proportion between online and in-person work according to different classes and lessons.

> I absolutely need to make changes. Actually, I have to customize my way of doing blended learning according to the characteristics of each class. For example, the size of a class, if it is a large class, I'll do it this way, but if it is a small class, say 20, I'll do it differently. (Lecturer 3)

Discussion

One essential finding from this study was that lecturers predominantly remained in the initial stages of adopting blended learning. They did not fully embrace blended learning and expressed a lack of comfort with this shift. This reluctance corresponded with previous research conducted in Vietnamese higher education institutions regarding blended learning adoption (Cao, 2022; Le et al., 2022; Pham & Nguyen, 2021). For instance, Le et al. (2022) reported a lack of knowledge among participants on how to implement blended learning in English teaching effectively. Similarly, Cao (2022) concluded that lecturers still harbored concerns and exhibited apprehension towards blended learning. A possible explanation for this reluctance could be that the implementation of blended learning was primarily a top-down decision within the surveyed university, lacking detailed guidelines on implementation, leveraging instructional benefits, and providing poor professional development (Hoang, 2015; Le & Johnson, 2022).

From a quantitative perspective, the lecturers' adoption of blended learning was superficial, as indicated by their intense concerns across all categories. When comparing the SoC profile observed in this research with typical non-user profiles outlined by George et al. (2006) and

those identified in other CBAM-based studies on technology adoption in education (Dele-Ajayi et al., 2021; Lochner et al., 2015; Olson et al., 2020), notable differences emerged. While the SoC profile in this study exhibited a similar trend to the mentioned profiles, it displayed significantly higher intensity across all stages of concern and a reduced disparity between the assessed stages, suggesting a more uniform level across the stages. The heightened intensity of concerns observed in almost all stages can be explained by the superficial adoption of blended learning among the lecturers. Despite the university's encouragement for blended learning implementation since 2016, the execution often lacked depth. This resulted in lecturers maintaining significant early concerns while feeling compelled to integrate this instructional approach into their teaching practices, thereby leading to management and impact concerns. Such distinct characteristic also implies that reactions to adoption can vary significantly and may not conform to predefined patterns and that concern stages are concurrent and overlapping (Ashrafzadeh & Sayadian, 2015; Dele-Ajayi et al., 2021). Therefore, it is recommended that the stages of concern proposed by the CBAM should be viewed as categorical rather than linear steps.

Other interesting insights emerged from examining the relationship between the lecturers' stages of concern and their demographic variables. The findings indicated no significant differences in lecturers' concerns about adopting blended learning based on gender, age, academic degree, and years of using blended learning. This aligns with results from several prior studies employing the CBAM to investigate lecturers' concerns about integrating technology in teaching, as seen in studies by Dele-Ajayi et al. (2021) and Al-Furaih and Al-Awidi (2020). Regarding the relationship between lecturers' self-assessment of blended learning competence and their managerial concerns, it was observed that the more confident lecturers were about blended learning, the less they were concerned about managerial aspects. Notably, the study revealed a connection between the lecturers' discipline and their collaborative concerns. Similar findings have been noted in literature; for instance, McKissic (2012) observed that science teachers were more adept at integrating technology into their practice than arts and humanities teachers. Al-Furaih & Al-Awidi (2020) suggested that Mathematics and science teachers were better adopters of smartphone technology. In the surveyed university, where most taught disciplines are business-related, lecturers of Business Communication Technology exhibited significantly higher motivation to collaborate in adopting blended learning, possibly due to their superior technological competence. This suggests the potential for leveraging them as pioneers in organizing workshops or seminars to support their colleagues or initiating collaborative groups to facilitate the blended learning implementation process.

Qualitatively, through dialogues with the lecturers, the study provided richer insights into the underlying reasons behind these stages of concern, unveiling the factors influencing Vietnamese lecturers' adoption of blended learning, both constraining and promoting it. One major obstacle identified was their instructional ambiguity toward blended learning. This uncertainty possibly came from the all-encompassing nature of blended learning that we discussed in the section Literature Review. Another rationale was that lecturers were not adequately provided with information and knowledge about the innovation, indicating a top-down policy implementation without sufficient support, particularly in terms of professional development (Pham & Nguyen, 2021; Hoang, 2019). At the time this study was conducted, there was a noticeable absence of an institutional definition or clear guidelines for implementing blended learning. While the university did offer three training courses on blended learning, not all lecturers were able to attend. Even among those who did participate, many expressed that

the provided courses were inadequate in meeting their needs. Another significant concern was technological apprehension, as technology skills are perceived as crucial for effective blended teaching (Graham, 2019). If high levels of technology self-efficacy among lecturers could serve as a reliable indicator of their active application of blended learning (Cao, 2022), low technological competence contributed to resistance among participants (Aldosemani et al., 2019; Le et al., 2022; Pham & Nguyen, 2021; Tshabalala et al., 2014). This underscores the need for comprehensive support and professional development initiatives in terms of technology integration.

Additionally, lecturers expressed concerns about heavy workloads despite the anticipated time-saving benefits of blended learning (Arnett, 2016). Similar challenges of managing numerous tasks within a limited time have been observed in K-12 settings (Hanny et al., 2021) and tertiary environments (Borgerding et al., 2013). The concerns about the heavy workload may have arisen due to the inappropriate and unsuccessful implementation of blended learning (Le et al., 2022). Plus, it is important to acknowledge that integrating blended learning or any technology always incurs upfront costs, as teachers need time to learn and adapt to new methods. As lecturers gradually master blended learning and develop reusable resources, these initial costs are likely to diminish. While our research was conducted during the initial phase of blended learning, participants' negative assumptions and experiences of workload demands are understandable.

Furthermore, lecturers indicated skepticism about their students' autonomy. This concern is well-founded, as previous research has established an interrelationship between learner autonomy and academic performance within the blended learning environment (Günes & Alagözlü, 2020). Despite these concerns, the participants had a strong sense of optimism regarding the influence of blended learning on students. They believed that blended learning could positively impact students' learning outcomes and foster the technological competence required for effective engagement with blended learning.

On a positive note, the study highlighted some encouraging factors promoting blended learning adoption among lecturers. Participants demonstrated learning readiness, indicating a positive mindset and willingness to embrace change for the benefit of students' learning experiences. This positive attitude, if leveraged by appropriate support and resources, could have the potential to facilitate the effective adoption and implementation of blended learning. In addition, lecturers expressed enthusiasm for intradisciplinary collaboration. However, lecturers revealed their preference for being followers, receiving knowledge rather than taking on leadership roles in collaborations. This reluctance may stem from a lack of expertise in blended learning and technological skills, as well as cultural norms emphasizing conservatism and shyness (Truong & Wang, 2019). Finally, adaptability emerged as a crucial attitude among lecturers. This reflects their understanding that a one-size-fits-all blended learning approach may not be effective in meeting their students' diverse needs and characteristics. It also demonstrated their proactive approach to enhancing teaching practices and commitment to continuous improvement and professional growth (Collie et al., 2018). These findings underscore the promising potential of blended learning in successfully integrating into institutional practice when supported by comprehensive professional development initiatives and a conducive institutional environment.

The interaction between quantitative and qualitative findings underscores the complexity of lecturers' concerns. While the quantitative data quantified the prevalence and intensity of concerns, the qualitative data explained the reasons behind these concerns. Particularly, the

high levels of unrelated and self-focused concerns identified quantitatively were further elucidated by qualitative insights into the lecturers' experiences with instructional ambiguity, technological challenges, workload burdens, and skepticism about student autonomy. This holistic approach highlighted that a combination of insufficient institutional support and personal apprehensions drove the superficial adoption of blended learning. Simultaneously, the qualitative analysis revealed that, despite their apprehensions, lecturers also exhibited a positive attitude towards blended learning. This positive outlook can serve as a critical supportive factor for institutional blended learning adoption, indicating that appropriate actions should be taken to leverage this optimism and facilitate a more effective implementation.

Implications

The study's findings suggest that without addressing the identified concerns, lecturers are unlikely to integrate this instructional approach fully. This has several implications for practice and further research:

First, institutions must have clear communication and institutional guidelines. To eliminate confusion, institutions should provide a clear definition of blended learning. Additionally, issuing guidelines outlining requirements and evaluation criteria can support systematic implementation. By establishing clear communication channels and guidelines, expectations can be aligned, and a shared understanding can be created among lecturers and administrators.

Secondly, change facilitators should plan additional professional development initiatives that specifically address lecturers' instructional ambiguity, technological inefficiency, workload management concerns, and skepticism of student learning autonomy. It is recommended to design hands-on workshops, seminars, and mentoring programs conducted by qualified professionals in relevant fields. These initiatives will provide lecturers with practical guidance, exemplars, and support to create their teaching scripts and seamlessly integrate technology into their instructional practice. By equipping lecturers with such targeted, tangible, and ongoing professional development opportunities, educational institutions can enhance their confidence and competence in utilizing blended learning approaches, ultimately improving the overall quality of education delivery.

Thirdly, in order to spread blended learning institutionally and meet lecturers' needs for collaboration in doing blended learning, institutions should establish and encourage professional learning communities. These communities can provide a platform for lecturers to exchange expertise, share experiences, and support each other. By sharing the workload and promoting motivation, professional learning communities can alleviate concerns related to change adoption and contribute to the successful implementation of blended learning. In early adoption, it is essential to prioritize intradisciplinary collaboration. Once intradisciplinary collaboration is established and flourishes, lecturers will be better equipped to engage in fruitful collaboration across disciplines.

Fourthly, it is important to create a safe and encouraging environment for lecturers to experiment with blended learning. Rather than mandating change which could make lecturers react by adopting blended learning superficially, lecturers should be prepared step by step and given the freedom to take risks and reflect on their experiences. Acknowledging and celebrating the successes of blended learning pioneers can inspire others and promote a culture of innovation. Moreover, reducing workload, providing teaching assistants, and establishing technical support teams can alleviate concerns and reassure lecturers about the work burden

and the technical aspects of blended learning. Additionally, providing funds or incentives can further motivate lecturers to embrace blended learning.

Finally, in addition to addressing lecturers' concerns, it is crucial to conduct further research on their experiences and practices in implementing blended learning. Future studies should aim to explore lecturers' specific needs for support and professional development, taking into account contextual factors that influence their adoption of blended learning, such as institutional support, availability of resources, and adequacy of infrastructure. Understanding these aspects will not only enhance our knowledge of lecturers' perspectives on blended learning but also inform the design of targeted interventions and effective support mechanisms that empower lecturers to embrace the instructional approach. Moreover, conducting longitudinal studies that track the development trends of blended learning adoption in higher education settings will enable us to gain insights into the long-term impact and evolution of blended learning practices. As such, researchers can identify emerging trends, challenges, and opportunities, facilitating the continuous improvement and advancement of blended learning pedagogy.

Limitations of this research

The low return rate of the survey (35%) and limitations in participant recruitment might have raised concerns about the representativeness of the sample for the target academic population. Additionally, another limitation of this research is its sole focus on the first dimension of the CBAM, neglecting the Levels of Use and Innovation Configuration. This narrow focus, to some extent, limits the comprehensive understanding of lecturers' adoption and utilization of blended learning. Consequently, caution is advised when extending the generalization of the findings into practical applications, as the broader spectrum of adoption behaviors and implementation strategies has not been fully explored in this study.

Conclusion

This research is one of the pioneering studies using the CBAM model to examine blended learning adoption. Its main finding revealed that the participant lecturers were at the initial stage of adopting blended learning, tended to adopt it superficially, and had high self-concerns about its implementation. The study also highlighted specific prominent concerns among the lecturers who were required to use this teaching approach. On the one hand, the lecturers encountered uncertainty about the essence of blended learning, low confidence in their technological skills, difficulties in managing multiple tasks, and concern about students' learning autonomy. On the other hand, on a positive note, they showed their willingness to learn, eagerness to do an intradisciplinary collaboration, and readiness to adjust blended learning to their teaching practice. The goal of this research was to raise awareness among change facilitators and researchers about lecturers' concerns regarding blended learning while also providing implications for resolving their hindering concerns and promoting their supportive ones. Ultimately, the aim was to contribute to developing an effective roadmap for integrating blended learning in educational institutions.

In general, the research reinforced the consistency of CBAM theory in the early adoption of an innovation. Furthermore, it echoed previous studies' results on teachers' perceptions of blended learning, especially those conducted in Vietnamese contexts. Therefore, the CBAM can be reliable for measuring blended learning adoption. However, this application should be cautious

as our research reconfirmed that concern stages identified by the CBAM model are not necessarily sequential. In fact, adopters may experience different stages of concern simultaneously. This is because teacher change is a complex process that does not follow a linear path. Therefore, when applying the CBAM to examine blended learning adoption or any other innovation adoption, researchers should consider stages of concern as categorical rather than sequential.

Statements and Declarations

Financial Disclosure Statement

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Conflict of Interest Statement

All authors declare that they have no conflicts of interest.

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